

What is claimed is:

1. A process for the production of a stable composition comprising a mixture of sulfated estrogens, the process comprising the steps of:
  - a) reacting a sulfur trioxide complex with a mixture of alkali metal salts of estrogens to provide a mixture of sulfated alkali metal salts of estrogens;
  - b) adding a stabilizing amount of tris(hydroxymethyl)aminomethane; and
  - c) recovering the stable composition comprising the mixture of sulfated estrogens and tris(hydroxymethyl)aminomethane.
2. The process according to claim 1 wherein the estrogens comprise at least two of  $\Delta^{8,9}$ -dehydroestrone, estrone, equilin or derivatives thereof.
3. The process according to claim 1 wherein the sulfur trioxide complex is selected from the group consisting of sulfur trioxide-pyridine and sulfur trioxide-trimethylamine.
4. The process according to claim 1 wherein the alkali metal salt is selected from the group consisting of lithium, sodium, and potassium.
5. The process according to claim 1 wherein steps a) and b) are performed in an apolar, aprotic solvent.
6. The process of claim 5 wherein the solvent is tetrahydrofuran.
7. The process according to claim 1 wherein all steps are performed in a single reaction vessel.

8. The process according to claim 1 wherein the mixture of sulfated estrogens are produced in a specific ratio by starting with a specific ratio of at least two of  $\Delta^{8,9}$ -dehydroestrone, estrone, equilin or derivatives thereof.

9. The process according to claim 1 further comprising the step of obtaining the mixture of alkali metal salts of estrogens by reacting a mixture of estrogens with an alkali metal hydride in an apolar, aprotic solvent.

10. The process according to claim 9 wherein the sulfur trioxide complex is selected from the group consisting of sulfur trioxide-pyridine and sulfur trioxide-trimethylamine.

11. The process according to claim 9 wherein the alkali metal salt is selected from the group consisting of lithium, sodium, and potassium.

12. The process according to claim 9 wherein the apolar, aprotic solvent is tetrahydrofuran.

13. The process according to claim 9 wherein all steps are performed in a single reaction vessel.

14. The process according to claim 9 wherein the sulfated estrogens are produced in a specific ratio by starting with specific ratios of  $\Delta^{8,9}$ -dehydroestrone, estrone, and derivatives thereof.

15. A process for the production of a stable composition comprising a mixture of sulfated estrogens, the process comprising the steps of:

- a) reacting a mixture of estrogens with sodium hydride in an apolar, aprotic solvent to provide a mixture of alkali metal salts of the

- estrogens;
- b) reacting sulfur trioxide-trimethylamine with the mixture of alkali metal salts of estrogens in an apolar, aprotic solvent to provide a mixture of sulfated alkali metal salts of estrogens;
  - c) adding a stabilizing amount of tris(hydroxymethyl)aminomethane; and
  - d) recovering the stable composition comprising the mixture of sulfated estrogens and tris(hydroxymethyl)aminomethane.

16. The process according to claim 15 wherein the mixture of estrogens comprises at least two of  $\Delta^{8,9}$ -dehydroestrone, estrone, equilin or derivatives thereof.

17. The process according to claim 15 wherein the apolar, aprotic solvent is tetrahydrofuran.

18. The process according to claim 15 wherein all steps are performed in a single reaction vessel.

19. The process according to claim 15 wherein the sulfated estrogens are produced in a specific ratio by starting with a specific ratio of at least two of  $\Delta^{8,9}$ -dehydroestrone, estrone, equilin or derivatives thereof.